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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,561	04/25/2001	Yann Cheri	35451/127 (3626.Palm)	7494

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EXAMINER	
CASCHERA, ANTONIO A	
ART UNIT	**PAPER NUMBER**
2676	15

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/842,561	CHERI ET AL.	
	Examiner	Art Unit	
	Antonio A Caschera	2676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,7-17* is/are rejected.

7)☒ Claim(s) *3-6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-15
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on 1/27/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 7, 8, 10-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta (US 2002/0163524) in view of Narveson et al. (U.S. Patent 4,386,345).

In reference to claim 1, Dutta discloses a PDA comprising a housing (see large rectangle of Figure 1) and a display, having a front surface, supported by the housing (#101 of Figure 1). Dutta also discloses hardware components located within the PDA, and thus supported by the housing, utilized to communicate with the display (see page 2, paragraph 24 and Figure 2). Dutta discloses the hardware components configured to adjust both backlight and contrast display values (see Figure 8). Although Dutta discloses a light sensor configured to provide input to the hardware components of the PDA (see #107 of Figure 1) Dutta does not explicitly disclose the use of at least two light sensors however, Narveson et al. does. Narveson et al. discloses a color display apparatus for use under wide ranges of ambient light in aircraft cockpits

(see lines 1-3 of abstract). Narveson et al. discloses utilizing one or more ambient light sensors, positioned closely adjacent to or built into the bezel of the display unit, for correcting the brightness of the display unit (see column 6, lines 2-9 and lines 8-17 of abstract). Note, the positioning of the light sensors of Narveson et al., "built into the bezel of the display unit" is seen as equivalent to providing lighting conditions at the front surface of the display. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the automatic adjusting PDA display system of Dutta with the multiple ambient light sensors of Narveson et al. in order to provide the user with a best lit display of a device utilized in wide ambient light conditions by processing multiple ambient light sensor readings (see column 1, lines 55-64 and column 6, lines 2-9 of Narveson et la.). (*Further, see Response to Arguments below).*

In reference to claim 7, Dutta and Narveson et al. disclose all of the claim limitations as applied to claim 1 above in addition, Dutta discloses the system for automatic backlight and contrast control utilizing a PDA LCD screen (see page 1, paragraph 2).

In reference to claim 8, claim 8 is similar in scope to claim 1 and therefore is rejected under similar rationale. Further, Dutta discloses a photodetector located on the perimeter of an LCD configured to provide input to the hardware components of the PDA (see #107 of Figure 1). Narveson et al. discloses producing cockpit light voltages representative of measurements taken from the cockpit light sensors and producing a nominal brightness value using these signals along with display attribute signals (see columns 7-8, lines 62-10 and Figure 2a).

In reference to claims 10 and 15, Dutta and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively in addition, Narveson et al. discloses

converting the light sensor readings into "foot candles" terms using a well known "look-up" table method (see column 7, lines 64-68), these converted readings are further used to generate the nominal brightness signal.

In reference to claims 11 and 16, Dutta and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively in addition, Narveson et al. discloses calculating the nominal brightness value by multiplying the display reflectance attribute value by the converted light sensor value (see column 8, lines 10 and Figure 2a). Note, the office interprets such calculation equivalent to providing the signals to an algorithm to determine a control signal.

In reference to claims 12 and 17, Dutta and Helms disclose all of the claim limitations as applied to claims 8 and 13 respectively in addition, Dutta discloses computing contrast and backlight signals based upon the measure of light detected by a light sensor (see #802-804 of Figure 8). Note the office interprets the backlight signal of Dutta which controls the on/off state of the backlight of the LCD to be substantially similar to the brightness control signal claimed by applicant.

In reference to claim 13, claim 13 is similar in scope to claim 1 and therefore is rejected under similar rationale. Further, Dutta discloses a photodetector located on the perimeter of an LCD configured to provide input to the hardware components of the PDA (see #107 of Figure 1). Narveson et al. discloses producing cockpit light voltages representative of measurements taken from the cockpit light sensors and producing a nominal brightness value using these signals along with display attribute signals (see columns 7-8, lines 62-10 and Figure 2a). Note, the office interprets the disclosure of, "one or more ambient light sensors" of Narveson et al.

equivalent to the four signals providing lighting conditions at the four positions of applicant's claim.

3. Claims 2, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutta (US 2002/0163524), Narveson et al. (U.S. Patent 4,386,345) and further in view of Helms (U.S. Patent 5,952,992).

In reference to claim 2, Dutta and Narveson et al. disclose all of the claim limitations as applied to claim 1 above. Neither Dutta nor Narveson et al. explicitly disclose the two light sensors disposed near opposing edges of the display however Helms does. Helms discloses the use of two photodetectors to detect ambient light directed toward a display (see column 4, lines 41-51 and #14', 410 of Figure 4). Helms also discloses the two photodetectors on opposite sides of an LCD display (see #14' and 410 of Figure 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the photodetector positioning techniques of Helms with the automatic adjusting PDA display system of Dutta and the multiple ambient light sensors of Narveson et al. in order to provide multiple light readings sensing light directed towards the display from multiple angles/directions, ensuring the best possible brightness for the display based upon the ambient light conditions (see column 4, lines 52-62 of Helms).

In reference to claims 9 and 14, Dutta and Narveson et al. disclose all of the claim limitations as applied to claims 8 and 13 respectively above. Neither Dutta nor Narveson et al. explicitly disclose generating a control signal by averaging the first and second signals however Helms does. Helms discloses the use of two photodetectors to detect ambient light directed toward a display (see column 4, lines 41-51 and #14', 410 of Figure 4). Helms also discloses

computing a weighted average of signals generated by photodetectors #14 and 410 of Figure 4 to calculate a control signal indexed from a lookup table (see columns 4-5, lines 66-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the photodetector positioning techniques of Helms with the automatic adjusting PDA display system of Dutta and the multiple ambient light sensors of Narveson et al. in order to provide multiple light readings sensing light directed towards the display from multiple angles/directions, ensuring the best possible brightness for the display based upon the ambient light conditions (see column 4, lines 52-62 of Helms).

Response to Arguments

4. Applicant's arguments filed 1/27/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In reference to claims 1, 8 and 13, applicant argues that there is no motivation to combine Dutta and Narveson et al., "...in particular because the photodetectors of Narveson et al. are located in an aircraft cockpit and are in no way associated with a handheld computer or a mobile electronic device," (see page 5, lines 4-7 of 4th paragraph of Applicant's Remarks). The office

disagrees with such lack of motivation in that, although Narveson et al. discloses sensing ambient light conditions in a aircraft cockpit computer display, the office interprets such computing device to be of the mobile type or equivalent to a mobile electronic device. Even further, applicant's specification states other possible embodiments of the invention to be "mobile computing devices" (see page 3, paragraph 14 of specification) which again, is seen as equivalent to the aircraft computer of Narveson et al. Therefore the office interprets that Narveson et al. not only overcomes the limitations provided by the applicant's claims but also is directly applicable to the invention at hand as Narveson et al. corrects brightness in display devices.

Allowable Subject Matter

5. Claims 3-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claim 3, the prior art of record (Dutta (US 2002/0163524), Narveson et al. (U.S. Patent 4,386,345) and Helms (U.S. Patent 5,952,992)) does not explicitly disclose the handheld computer comprising four light sensors disposed on corners of a perimeter of the display.

In reference to claims 4-6, claims 4-6 are dependent upon objected claim 3 and are therefore also objected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703)-308-6829.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Matthew C. Bella

aac

3/15/04

MATTHEW C. BELLA
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TECHNOLOGY CENTER 2600